

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 2 of 16

Attorney's Docket No.: MP0430 / 13361-083001

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-4. (Cancelled)

5. (Presently Amended) The circuit of claim 4, A circuit, comprising:  
a charge-pump operable to supply an output voltage;  
a current mirror responsive to the output voltage of the charge-pump, and  
operable to output a relatively constant current and suppress noise from the output voltage;  
a filter arranged between the charge-pump and the current mirror, the filter  
operable to further suppress noise from the output voltage;  
wherein the current mirror is operable to isolate the filter from a load circuit in  
communication with the current mirror; and,  
wherein the load circuit includes a regulator loop operable to generate a consistent  
output voltage.

6. (Presently Amended) The circuit of claim 4, A circuit, comprising:  
a charge-pump operable to supply an output voltage;  
a current mirror responsive to the output voltage of the charge-pump, and  
operable to output a relatively constant current and suppress noise from the output voltage;  
a filter arranged between the charge-pump and the current mirror, the filter  
operable to further suppress noise from the output voltage;  
wherein the current mirror is operable to isolate the filter from a load circuit in  
communication with the current mirror; and,

Applicant : Shafiq M. Jarnal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 3 of 16

Attorney's Docket No.: MP0430 / 13361-083001

wherein the load circuit includes a voltage reference generator operable to generate a reference voltage.

7. (Presently Amended) The circuit of claim 4, A circuit, comprising:  
a charge-pump operable to supply an output voltage;  
a current mirror responsive to the output voltage of the charge-pump, and  
operable to output a relatively constant current and suppress noise from the output voltage;  
a filter arranged between the charge-pump and the current mirror, the filter  
operable to further suppress noise from the output voltage;  
wherein the current mirror is operable to isolate the filter from a load circuit in  
communication with the current mirror; and,

wherein the load circuit includes a voltage controlled oscillator operable to generate an output signal having a pre-determined oscillation frequency.

8. (Cancelled)

9. (Presently Amended) The circuit of claim 1, further comprising: A circuit,  
comprising:

a first charge-pump operable to supply an output voltage; and  
a current mirror responsive to the output voltage of the charge-pump, and  
operable to output a relatively constant current and suppress noise from the output voltage;  
a plurality of one or more second charge-pumps operable to supply an output  
voltage, and wherein the current mirror is operable to suppress noise from the output voltage of  
the plurality of second charge-pumps.

10. (Original) The circuit of claim 9, wherein the current mirror is operable to reject variations in the output voltage of the plurality of charge-pumps.

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 4 of 16

Attorney's Docket No.: MP0430 / 13361-083001

11. (Original) The circuit of claim 9, further comprising:  
one or more filters arranged between the plurality of charge-pumps and the  
current mirror, the one or more filters operable to further suppress noise from the output voltage  
of the plurality of charge-pumps.

12. (Original) The circuit of claim 11, wherein at least one of the one or more filters  
includes a bypass capacitance.

13. (Original) The circuit of claim 11, further comprising:  
a plurality of current mirrors, each current mirror operable to provide a constant  
current to a corresponding load circuit and suppress noise from a corresponding output voltage of  
a charge-pump.

14. (Original) The circuit of claim 13, wherein at least one of the plurality of load  
circuits includes a regulator loop operable to generate a consistent output voltage.

15. (Original) The circuit of claim 13, wherein at least one of the plurality of load  
circuits includes a voltage reference generator operable to generate a reference voltage.

16. (Original) The circuit of claim 13, wherein at least one of the plurality of load  
circuits includes a voltage controlled oscillator operable to generate an output signal having a  
pre-determined oscillation frequency.

17-20. (Cancelled)

21. (Presently Amended) The circuit of claim 20, A circuit, comprising:  
supply means for supplying an output voltage;  
suppression means for suppressing noise from the supplied output voltage and  
converting the supplied output voltage into a relatively constant current;  
filtering means arranged between the supply means and the suppression means,  
the filtering means for further suppressing noise from the supplied output voltage;

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 5 of 16

Attorney's Docket No.: MP0430 / 13361-083001

wherein the suppression means isolates the filtering means from a loading means  
in communication with the suppression means; and,

wherein the loading means includes a regulator loop means for generating a  
consistent output voltage.

22. (Presently Amended) The circuit of claim 20, A circuit, comprising:  
supply means for supplying an output voltage;  
suppression means for suppressing noise from the supplied output voltage and  
converting the supplied output voltage into a relatively constant current;  
filtering means arranged between the supply means and the suppression means,  
the filtering means for further suppressing noise from the supplied output voltage;  
wherein the suppression means isolates the filtering means from a loading means  
in communication with the suppression means; and,  
wherein the loading means includes a voltage reference generator means for  
generating a reference voltage.

23. (Presently Amended) The circuit of claim 20, A circuit, comprising:  
supply means for supplying an output voltage;  
suppression means for suppressing noise from the supplied output voltage and  
converting the supplied output voltage into a relatively constant current;  
filtering means arranged between the supply means and the suppression means,  
the filtering means for further suppressing noise from the supplied output voltage;  
wherein the suppression means isolates the filtering means from a loading means  
in communication with the suppression means; and,  
wherein the loading means includes a voltage controlled oscillator means for  
generating an output signal having a pre-determined oscillation frequency.

24-25. (Cancelled)

Applicant : Shafiq M. Jamal et al..  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 6 of 16

Attorney's Docket No.: MP0430 / 13361-083001

26. (Presently Amended) The circuit of claim 17, A circuit, comprising:  
supply means for supplying an output voltage; and

suppression means for suppressing noise from the supplied output voltage and  
converting the supplied output voltage into a relatively constant current; and,

wherein the supply means includes a plurality of charge-pump means.

27. (Original) The circuit of claim 26, wherein the suppression means rejects voltage variations from an output voltage of the plurality of charge-pump means.

28. (Original) The circuit of claim 26, further comprising:  
a filtering means including one or more filter means arranged between the plurality of charge-pump means and the suppression means, the one or more filter means for further suppressing noise from the output voltage of the plurality of charge-pump means.

29. (Original) The circuit of claim 28, wherein at least one of the one or more filter means includes a bypass capacitance means.

30. (Original) The circuit of claim 28, wherein the suppression means includes a plurality of current mirror means in communication with a plurality of loading means, each current mirror means for providing a relatively constant current source to a corresponding loading means and suppressing noise from an output voltage of a corresponding charge-pump means.

31. (Original) The circuit of claim 30, wherein the plurality of loading means includes a plurality of regulator loop means for generating a consistent output voltage.

32. (Original) The circuit of claim 30, wherein the plurality of loading means includes a plurality of voltage reference generator means for generating a reference voltage.

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 7 of 16

Attorney's Docket No.: MP0430 / 13361-083001

33. (Original) The circuit of claim 30, wherein the plurality of loading means includes a plurality of voltage controlled oscillator means for generating an output signal having a pre-determined oscillation frequency.

34-37. (Cancelled)

38. (Presently Amended) The method of claim 37, A method of suppressing noise, comprising:

providing an output voltage having an associated noise component;  
suppressing the noise component in the output voltage including supplying a  
relatively constant current in response to the output voltage;  
filtering the output voltage with a filtering apparatus to further suppress the noise  
component;  
isolating the filter apparatus from a load circuit receiving the relatively constant  
current source; and,  
wherein isolating the filter apparatus includes isolating the filter apparatus from a  
regulator loop operable to generate a consistent output voltage.

39. (Presently Amended) The method of claim 37, A method of suppressing noise, comprising:

providing an output voltage having an associated noise component;  
suppressing the noise component in the output voltage including supplying a  
relatively constant current in response to the output voltage;  
filtering the output voltage with a filtering apparatus to further suppress the noise  
component;  
isolating the filter apparatus from a load circuit receiving the relatively constant  
current source; and,  
wherein isolating the filter apparatus includes isolating the filter apparatus from a  
voltage reference generator operable to generate a reference voltage.

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 8 of 16

Attorney's Docket No.: MP0430 / 13361-083001

40. (Presently Amended) ~~The method of claim 37, A method of suppressing noise, comprising:~~

providing an output voltage having an associated noise component;  
suppressing the noise component in the output voltage including supplying a  
relatively constant current in response to the output voltage;  
filtering the output voltage with a filtering apparatus to further suppress the noise  
component;  
isolating the filter apparatus from a load circuit receiving the relatively constant  
current source; and,  
wherein isolating the filter apparatus includes isolating the filter apparatus from a  
voltage controlled oscillator operable to generate an output signal having a pre-determined  
oscillation frequency.

41. (Cancelled)

42. (Presently Amended) ~~The method of claim 34, further comprising: A method of~~  
suppressing noise, comprising:

providing an output voltage having an associated noise component; and  
suppressing the noise component in the output voltage including supplying a  
relatively constant current in response to the output voltage; and,  
providing an output voltage to a load circuit from a plurality of charge-pumps,  
and suppressing noise from the output voltage of the plurality of charge-pumps.

43. (Original) The method of claim 42, wherein suppressing the noise component  
includes rejecting variations in the output voltage of the plurality of charge-pumps.

44. (Original) The method of claim 43, further comprising:  
filtering the output voltage to suppress noise including providing a plurality of  
filters arranged between the plurality of charge-pumps and the current mirror.

Applicant : Shafiq M. Jamal et al..  
Serial No: : 10/802,364  
Filed : March 16, 2004  
Page : 9 of 16

Attorney's Docket No.: MP0430 / 13361-083001

45. (Original) The method of claim 44, wherein filtering the output voltage to suppress noise includes providing a bypass capacitance.

46. (Original) The method of claim 44, further comprising:  
suppressing a noise component in the output voltage including providing a plurality of current mirrors that are operable to supply a relatively constant current to a like plurality of load circuits.

47. (Original) The method of claim 46, wherein:  
supplying the relatively constant current includes supplying the relatively constant current to a plurality of regulator loops, each regulator loop operable to generate a consistent output voltage.

48. (Original) The method of claim 46, wherein:  
supplying the relatively constant current includes supplying the relatively constant current to a plurality of voltage reference generators, each voltage reference generator operable to generate a reference voltage.

49. (Original) The method of claim 46, further comprising:  
supplying the relatively constant current includes supplying the relatively constant current to a plurality of voltage controlled oscillators, each voltage controlled oscillator operable to generate an output signal having a pre determined oscillation frequency.

50. (Original) An Ethernet transceiver, comprising:  
a transmitter;  
a receiver;  
a charge-pump operable to supply an output voltage to a current mirror;  
the current mirror arranged between the charge-pump and a voltage regulator, the current mirror operable to supply a relatively constant current to the voltage regulator and suppress noise from the output voltage of the charge-pump; and

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 10 of 16

Attorney's Docket No.: MP0430 / 13361-083001

the voltage regulator further in communication with at least one of the transmitter and the receiver, the voltage regulator operable to provide a relatively constant voltage to the at least one of the transmitter and the receiver.

51. (Original) The Ethernet transceiver of claim 50, further comprising:  
a filter arranged between the charge-pump and the current mirror, the filter operable to further suppress noise from the output voltage of the charge-pump.

52. (Original) The Ethernet transceiver of claim 51, wherein the filter includes a bypass capacitance.

53. (Original) The Ethernet transceiver of claim 51, wherein the current mirror is operable to isolate the filter from the voltage regulator.

54. (Original) The Ethernet transceiver of claim 53, wherein the voltage regulator includes a regulator loop operable to generate a consistent output voltage.

55. (Original) The Ethernet transceiver of claim 53, wherein the voltage regulator includes a voltage reference generator operable to generate a reference voltage.

56. (Original) The Ethernet transceiver of claim 53, wherein the voltage regulator includes a voltage controlled oscillator operable to generate an output signal having a pre-determined oscillation frequency.

57. (Original) The Ethernet transceiver of claim 50, wherein the current mirror is operable to reject variations in the output voltage of the charge-pump.

58. (Original) The Ethernet transceiver of claim 50, further comprising:  
a plurality of charge-pumps operable to supply an output voltage, the current mirror operable to suppress noise from the output voltage of the plurality of charge-pumps.

Applicant : Shaiq M. Jamal et al..  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 11 of 16

Attorney's Docket No.: MP0430 / 13361-083001

59. (Original) The Ethernet transceiver of claim 58, further comprising:  
one or more filters arranged between the plurality of charge-pumps and the  
current mirror, the one or more filters operable to further suppress noise from the output voltage  
of the plurality of charge-pumps.

60. (Original) The Ethernet transceiver of claim 59, wherein at least one of the one or  
more filters includes a bypass capacitance.

61. (Original) The Ethernet transceiver of claim 58, wherein the current mirror is  
operable to reject variations in the output voltage of the plurality of charge-pumps.

62. (Original) The Ethernet transceiver of claim 50, wherein the Ethernet transceiver  
is compliant with IEEE 1000BaseT.

63-66. (Cancelled)

67. (Presently Amended) The Ethernet transceiver of claim 66, An Ethernet  
transceiver, comprising:

transmitter means for transmitting a signal;  
receiver means for receiving a signal;  
supply means for supplying an output voltage to a noise suppression means, the  
noise suppression means for suppressing noise from the supplied output voltage and converting  
the supplied output voltage into a relatively constant current, and supplying the relatively  
constant current to a loading means;

wherein the noise suppression means comprises:  
filtering means for further suppressing noise from the supplied output voltage;  
wherein noise suppression means isolates the filtering means from the loading  
means; and  
wherein the loading means includes a regulator loop means for generating a  
consistent output voltage.

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 12 of 16

Attorney's Docket No.: MP0430 / 13361-083001

68. (Presently Amended) The Ethernet transceiver of claim 66, An Ethernet transceiver, comprising:

transmitter means for transmitting a signal;  
receiver means for receiving a signal;  
supply means for supplying an output voltage to a noise suppression means, the noise suppression means for suppressing noise from the supplied output voltage and converting the supplied output voltage into a relatively constant current, and supplying the relatively constant current to a loading means;

wherein the noise suppression means comprises:  
filtering means for further suppressing noise from the supplied output voltage;  
wherein noise suppression means isolates the filtering means from the loading means; and  
wherein the loading means includes a voltage reference generator means for generating a reference voltage.

69. (Presently Amended) The Ethernet transceiver of claim 66, An Ethernet transceiver, comprising:

transmitter means for transmitting a signal;  
receiver means for receiving a signal;  
supply means for supplying an output voltage to a noise suppression means, the noise suppression means for suppressing noise from the supplied output voltage and converting the supplied output voltage into a relatively constant current, and supplying the relatively constant current to a loading means;

wherein the noise suppression means comprises:  
filtering means for further suppressing noise from the supplied output voltage;  
wherein noise suppression means isolates the filtering means from the loading means; and  
wherein the loading means includes a voltage controlled oscillator means for generating an output signal having a pre-determined oscillation frequency.

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 13 of 16

Attorney's Docket No.: MP0430 / 13361-083001

70-71. (Cancelled)

72. (Presently Amended) ~~The Ethernet transceiver of claim 63, An Ethernet transceiver, comprising:~~

~~transmitter means for transmitting a signal;~~  
~~receiver means for receiving a signal;~~  
~~supply means for supplying an output voltage to a noise suppression means, the noise suppression means for suppressing noise from the supplied output voltage and converting the supplied output voltage into a relatively constant current, and supplying the relatively constant current to a loading means; and,~~  
~~wherein the supply means includes a plurality of charge-pump means.~~

73. (Original) The Ethernet transceiver of claim 72; wherein the noise suppression means further includes:

a filtering means including one or more filter means in communication with the plurality of charge-pump means, the one or more filter means operable to suppress noise from an voltage output of the plurality of charge-pump means.

74. (Original) The Ethernet transceiver of claim 73, wherein at least one of the one or more filter means includes a bypass capacitance means.

75. (Original) The Ethernet transceiver of claim 72, wherein the noise suppression means rejects voltage variations from the output of the plurality of charge-pump means.

76. (Presently Amended) ~~The Ethernet transceiver of claim 63, An Ethernet transceiver, comprising:~~

~~transmitter means for transmitting a signal;~~  
~~receiver means for receiving a signal;~~  
~~supply means for supplying an output voltage to a noise suppression means, the noise suppression means for suppressing noise from the supplied output voltage and converting~~

Applicant : Shafiq M. Jamal et al.  
Serial No. : 10/802,364  
Filed : March 16, 2004  
Page : 14 of 16

Attorney's Docket No.: MP0430 / 13361-083001

the supplied output voltage into a relatively constant current, and supplying the relatively constant current to a loading means; and,

wherein the Ethernet transceiver is compliant with IEEE 1000BaseT.

77. (Cancelled)

78. (Original) The circuit of claim 12, wherein the bypass capacitance includes a bypass capacitor.

79. (Cancelled)

80. (Original) The circuit of claim 29, wherein the bypass capacitance means includes a bypass capacitor means.

81. (Cancelled)

82. (Original) The method of claim 45, wherein providing a bypass capacitance includes providing a plurality of bypass capacitors.

83. (Original) The Ethernet transceiver of claim 52, wherein the bypass capacitance includes a bypass capacitor.

84. (Original) The Ethernet transceiver of claim 60, wherein the bypass capacitance includes a bypass capacitor.

85. (Cancelled)

86. (Original) The Ethernet transceiver of claim 74, wherein the bypass capacitance means includes a bypass capacitor means.